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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------|------------------------|
| 10/723,002 | 11/26/2003 | Tianbing Brian Teng | 7293-056 | 9568 |
| 20575 7590 06/14/2007 MARGER JOHNSON & MCCOLLOM, P.C. 210 SW MORRISON STREET, SUITE 400 PORTLAND, OR 97204 | | | EXAMINER CRUZ, MAGDA | |
| | | | ART UNIT 2851 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/723,002 | Applicant(s) TENG ET AL. | |
| | Examiner Magda Cruz | Art Unit 2851 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 and 13 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Examiner's Comment

1. In view of the following prior art, the finality of the Final Rejection mailed on 04/10/2007 is withdrawn and prosecution is reopened.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-13 and 36 are rejected under 35 U.S.C. 102(a) as being anticipated by Ejiri et al.

Ejiri et al. (US 2002/0089651 A1) disclose:

- Regarding claims 1 and 8-9, selecting a plurality of corners within an original image projected as a distorted image on a projection surface using a graphical user interface (page 3, paragraph 0043, lines 4-18); and predistorting the original image responsive to the selecting (i.e. relation between the coordinated before and after the correction), where the predistorted image exhibits no distortion when projected on the projection surface (page 4, paragraphs 0044 and 0045); where the predistorting (i.e. correcting distortion) the image comprises scaling the image (i.e. using

sets of coordinates, the conversion matrix is determined for correcting the distortion; page 4, paragraph 0045).

- Regarding claims 2 and 5, aligning a center of the original projected image with a center of the projection surface (page 5, paragraph 0051, lines 11-15).
- Regarding claims 3 and 4, the distorting is responsive to the aligning (page 5, paragraph 0051, lines 15-19).
- Regarding claims 6 and 7, the selecting comprises selecting corners of the image (page 4, paragraph 0043, lines 4-9).
- Regarding claims 10-13, the scaling comprises vertically and horizontal scaling (page, 3, paragraph 0035, lines 4-9).
- Regarding claim 36, the original image projected as a distorted image on a projection surface appears wider at the top than at the bottom (clearly illustrated in Figure 9).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 26-28 and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ejiri et al. in view of Kobayashi.

Ejiri et al. (US 2002/0089651 A1) teach the salient features of the present invention as explained above, except a controller to predistort the original image to account for any keystone distortion.

Kobayashi (US Patent Number 6,056,408) discloses:

- Regarding claim 26, a user interface (Figure 5, element 21) to allow a user to graphically identify a plurality of corners (i.e. "+" marks in Figure 5) of an original image (Figure 5, element 5) as projected as a distorted image on a surface (Figure 5, element 3); a controller (Figure 5, element 8) to distort the image to account for any keystone distortion responsive to the plurality of corners (i.e. "+" marks in Figure 5).
- Regarding claim 27, aligning a center (i.e. barycenter position of the coordinates) of the original projected image with a center of the projection surface (column 7, lines 30-31).
- Regarding claim 28, the interface (Figure 5, element 21) is a graphical user interface (column 9, lines 52-54).
- Regarding claim 32, the selecting comprises selecting two corners of the image (i.e. two marks "+" of the marker group, element 6; column 5, lines 38-40).
- Regarding claim 33, the selecting comprises selecting four corners of the image (i.e. four marks "+" of the projected image; column 5, lines 41-44):

- Regarding claim 34, the controller (i.e. control device; element 8) generates a distorted image before projecting the distorted image on the surface (column 6, lines 39-46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the controller to predistort the original image as shown by Kobayashi in combination with Ejiri et al.'s invention for the purpose of providing a method for displaying a projected image on a screen without causing any deviation in the projected image (Kobayashi, column 2, lines 9-11).

6. Claims 14-19 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ejiri et al. in view of Kobayashi as applied to claims 26-28 and 32-34 above, and further in view of Deering.

Kobayashi (US Patent Number 6,056,408) discloses:

- Regarding claim 14, means for graphically selecting a plurality of corners (i.e. four marks "+") within an original image (Figure 1, element 5) as projected distorted on a projection surface (Figure 1, element 3); and means for distorting the image responsive to the plurality of corners (column 5, lines 35-40).
- Regarding claim 15, aligning a center (i.e. barycenter position of the coordinates) of the original projected image with a center of the projection surface (column 7, lines 30-31).

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- Regarding claim 16, the distorting is responsive to the aligning (i.e. correcting a positional deviation; column 8, lines 20-24; and column 7, lines 56-61).
- Regarding claim 17, fixing a center (i.e. barycenter A0 and B0) of the predistorted image coincident with the center of the projection surface (column 7, lines 34-42).
- Regarding claim 18, the selecting comprises selecting two corners of the image (i.e. two marks "+" of the marker group, element 6; column 5, lines 38-40).
- Regarding claim 19, the selecting comprises selecting four corners of the image (i.e. four marks "+" of the projected image; column 5, lines 41-44).

Ejiri et al. (US 2002/0089651 A1) in combination with Kobayashi (US Patent Number 6,056,408) teach the salient features of the present invention as explained above, except (regarding claim 14) an input from a user through a graphical user interface, and (regarding claim 37) the original image projected distorted on a projection surface appears wider at the top than at the bottom.

Deering (US Pub. No. 2002/0008697 A1) discloses:

- Regarding claim 14, using an input from a user through a graphical user interface (page 26, paragraph 0318, lines 10-13).
- Regarding claim 37, the original image projected distorted on a projection surface appears wider at the top than at the bottom (clearly illustrated in Figure 25B).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize an input from a user through a graphical user interface and a projected image wider at the top than at the bottom as shown by Deering in combination with Kobayashi's invention for the purpose of compensating image distortions introduced by a display device and/or display surface (Deering, abstract, lines 6-7).

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ejiri et al. in view of Kobayashi as applied to claims 26-28 and 32-34 above, and further in view of West et al.

Ejiri et al. (US 2002/0089651 A1) in combination with Kobayashi (US Patent Number 6,056,408) teach the salient features of the present invention as explained above, except using an on screen display means to do the selecting.

West et al. (US Patent Number 6,339,434 B1) disclose the use of an on screen display means to do the selecting (i.e. OSD controller, element 145).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the on screen display disclosed by West et al. in combination with Kobayashi's invention for the purpose of allowing transparent and semi-transparent overlays to be displayed (column 10, lines 19-20).

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ejiri et al. in view of Kobayashi as applied to claims 26-28 and 32-34 above, and further in view of West et al.

Ejiri et al. (US 2002/0089651 A1) in combination with Kobayashi (US Patent Number 6,056,408) teach the salient features of the present invention as explained above, except predistorting the image comprises scaling the image.

West et al. (US Patent Number 6,339,434 B1) disclose predistorting (i.e. size adjustments) the image comprises scaling the image (column 2, lines 26-29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to scaling the image as shown by West et al. in combination with Kobayashi's invention for the purpose of improving the image resizing (West et al., column 2, lines 26-27).

9. Claims 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ejiri et al. in view of Kobayashi as applied to claims 26-28 and 32-34 above, and further in view of West et al.

Ejiri et al. (US 2002/0089651 A1) in combination with Kobayashi (US Patent Number 6,056,408) teach the salient features of the present invention as explained above, except a vertical scalar to vertically scale the image; and a horizontal scalar to horizontally scale the image.

West et al. (US Patent Number 6,339,434 B1) disclose a vertical scalar (Figure 11, element 21) to vertically scale the image; and a horizontal scalar (Figure 11, element 22) to horizontally scale the image.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to vertically and horizontally scale the image as shown by West et

al. in combination with Kobayashi's invention for the purpose of improving the image resizing (West et al., column 2, lines 26-27).

10. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ejiri et al. in view of Kobayashi as applied to claims 26-28 and 32-34 above, and further in view of West et al.

Ejiri et al. (US 2002/0089651 A1) in combination with Kobayashi (US Patent Number 6,056,408) teach the salient features of the present invention as explained above, except the vertically scaling comprises calculating vertical scalar registers.

West et al. (US Patent Number 6,339,434 B1) disclose vertically scaling by calculating vertical scalar registers (column 7, lines 1-3 and 6-9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to vertically scaling by calculating vertical scalar registers as shown by West et al. in combination with Kobayashi's invention for the purpose of improving the image resizing (West et al., column 2, lines 26-27).

11. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ejiri et al. in view of Kobayashi as applied to claims 26-28 and 32-34 above, and further in view of West et al.

Ejiri et al. (US 2002/0089651 A1) in combination with Kobayashi (US Patent Number 6,056,408) teach the salient features of the present invention as explained above, except the horizontally scaling comprises calculating horizontal scalar registers.

West et al. (US Patent Number 6,339,434 B1) disclose horizontally scaling by calculating horizontal scalar registers (column 7, lines 64-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to horizontally scaling by calculating horizontal scalar registers as shown by West et al. in combination with Kobayashi's invention for the purpose of improving the image resizing (West et al., column 2, lines 26-27).

12. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ejiri et al. in view of Kobayashi as applied to claims 26-28 and 32-34 above, and further in view of West et al.

Ejiri et al. (US 2002/0089651 A1) in combination with Kobayashi (US Patent Number 6,056,408) teach the salient features of the present invention as explained above, except vertically scaling the original image responsive to the graphically selecting and aligning by calculating vertical scalar registers and horizontally scaling the original image responsive to the graphically selecting and aligning by calculating horizontal scalar registers (column 10, lines 1-5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to vertically and horizontally scaling an image as shown by West et al. in combination with Kobayashi's invention for the purpose of improving the image resizing (West et al., column 2, lines 26-27).

13. Claims 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ejiri et al. in view of Kobayashi as applied to claims 26-28 and 32-34 above, and further in view of Deering.

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Ejiri et al. (US 2002/0089651 A1) in combination with Kobayashi (US Patent Number 6,056,408) teach the salient features of the present invention as explained above, except an input from a user through a graphical user interface.

Deering (US Pub. No. 2002/0008697 A1) discloses using an input from a user through a graphical user interface (page 26, paragraph 0318, lines 10-13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize an input from a user through a graphical user interface as shown by Deering in combination with Ejiri et al. and Kobayashi's invention for the purpose of compensating image distortions introduced by a display device and/or display surface (Deering, abstract, lines 6-7).

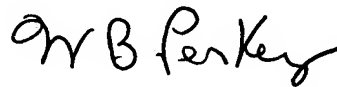
Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magda Cruz whose telephone number is (571) 272-2114. The examiner can normally be reached on Monday through Thursday 8:00-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571) 272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



William Perkey
Primary Examiner

Magda Cruz
Patent Examiner

June 10, 2007